

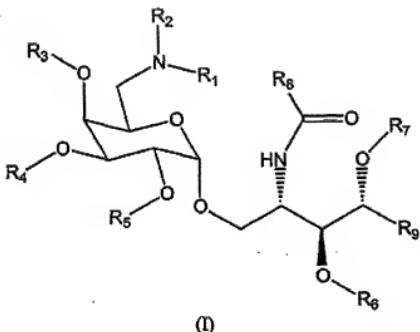
Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

The following set of claims replaces all the previous set of claims.

1. (Currently Amended) A compound of Formula (I):



wherein,

R_1 is $[[\cdot]] - C(O)R_{10}$, wherein R_{10} is

(i) ~~hydrogen; or~~

(ii) $\text{SO}_2\text{R}_{105}$

(iii) wherein R_{10} is:

halo; hydroxy; OR₁₁; OR₁₂; amino; NHR₁₁; N(R₁₁)₂; NHR₁₂; N(R₁₂)₂; aralkylamine; or

C₁-C₁₂ alkyl optionally substituted with halo, hydroxy, o xo, nitro, OR₁₋₁₇, OR₁₋₂₅, acyloxy, amino, NHR₁₋₁₁, N(R₁₋₁₂)₂, NHR₁₋₁₂, N(R₁₋₁₂)₂, aralkylamine, mercapto, thioalkoxy,

Amendment dated April 27, 2009

Reply to Final Office Action of October 27, 2008

$S(O)R_{11}, S(O)R_{12}, SO_2R_{11}, SO_2R_{12}, NHSO_2R_{11}, NHSO_2R_{12}$, sulfate, phosphate, cyano, carboxyl, $C(O)R_{11}, C(O)R_{12}, C(O)OR_{11}, C(O)NH_2, C(O)NHR_{11}, C(O)N(R_{11})_2, C_3-C_{10}$ cycloalkyl containing 0-3 R_{13}, C_3-C_{10} heterocyclyl containing 0-3 R_{13}, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_5-C_{10} cycloalkenyl, C_5-C_{10} heterocycloalkenyl, C_6-C_{20} aryl containing 0-3 R_{14} , or heteroaryl containing 0-3 R_{14} ; or

C_3-C_{10} cycloalkyl, C_3-C_{10} heterocyclyl, C_5-C_{10} cycloalkenyl, or C_5-C_{10} heterocycloalkenyl optionally substituted with one or more halo, hydroxy, oxe, OR_{11} , OR_{12} , acyloxy, nitro, amino, $NHR_{11}, N(R_{11})_2, NHR_{12}, N(R_{12})_2$, aralkylamino, mercapto, thioalkoxy, $S(O)R_{11}, S(O)R_{12}, SO_2R_{11}, SO_2R_{12}, NHSO_2R_{11}, NHSO_2R_{12}$, sulfate, phosphate, cyano, carboxyl, $C(O)R_{11}, C(O)R_{12}, C(O)OR_{11}, C(O)NH_2, C(O)NHR_{11}, C(O)N(R_{11})_2$, alkyl, haloalkyl, C_3-C_{10} cycloalkyl containing 0-3 R_{13}, C_3-C_{10} heterocyclyl containing 0-3 R_{13}, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_5-C_{10} cycloalkenyl, C_5-C_{10} heterocycloalkenyl, C_6-C_{20} aryl heteroaryl containing 0-3 R_{14} , or C_6-C_{20} heteroaryl containing 0-3 R_{14} ; or

C_2-C_6 alkenyl, C_2-C_6 alkynyl, aryl, or heteroaryl optionally substituted with one or more halo, hydroxy, OR_{11}, OR_{12} , acyloxy, nitro, amino, $NHR_{11}, N(R_{11})_2, NHR_{12}, N(R_{12})_2$, aralkylamino, mercapto, thioalkoxy, $S(O)R_{11}, S(O)R_{12}, SO_2R_{11}, SO_2R_{12}, NHSO_2R_{11}, NHSO_2R_{12}$, sulfate, phosphate, cyano, carboxyl, $C(O)R_{11}, C(O)R_{12}, C(O)OR_{11}, C(O)NH_2, C(O)NHR_{11}, C(O)N(R_{11})_2$, alkyl, haloalkyl, C_3-C_{10} cycloalkyl containing 0-3 R_{13}, C_3-C_{10} heterocyclyl containing 0-3 R_{13}, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_5-C_{10} cycloalkenyl, C_5-C_{10} heterocycloalkenyl, C_6-C_{20} aryl containing 0-3 R_{14} , or C_6-C_{20} heteroaryl containing 0-3 R_{14} ; or

(iii) $-C(O)R_{10}$, wherein R_{10} is defined as above; or

(iv) $-C(R_{10})_2(R_{15})$, wherein R_{10} is defined as above; R_{15} is hydrogen, R_{10} , or R_{15} and R_2 taken together forms a double bond between the carbon and nitrogen atoms to which they are attached; or

(v) R_1 and R_2 taken together forms a heterocyclyl of 3-10 ring atoms optionally substituted with R_{10} ;

R₂ is hydrogen, or R₂ and R₄ taken together forms a double bond between the carbon and nitrogen atoms to which they are attached, or R₂ and R₄ taken together forms a heterocyclic of 3-10 ring atoms optionally substituted with R₁₀;

R₃, R₄, R₅, R₆ and R₇ are each independently hydrogen, C₁-C₆ alkyl, C₆-C₁₂ aralkyl, or C₁-C₆ aroyl;

R₈ is -(CH₂)_xCH₃;

R₉ is a linear or branched C₃-C₁₀₀ alkyl;

R₁₁ is C₁-C₂₀ alkyl optionally substituted with halo, hydroxy, alkoxy, amino, alkylamino, dialkylamino, sulfate, or phosphate;

R₁₂ is aryl optionally substituted with halo, haloalkyl, hydroxy, alkoxy, nitro, amino, alkylamino, dialkylamino, sulfate, or phosphate;

Each R₁₃ is independently halo, halo alkyl, hydroxy, alkoxy, oxo, amino, alkylamino, dialkylamino, sulfate, or phosphate;

Each R₁₄ is independently halo, halo alkyl, hydroxy, alkoxy, nitro, amino, alkylamino, dialkylamino, sulfate, or phosphate; and

x is 1-100.

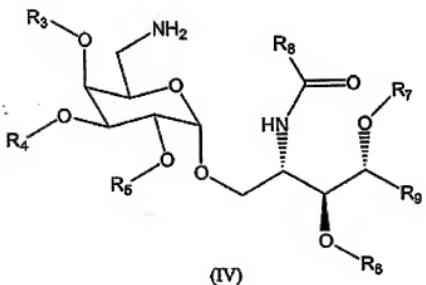
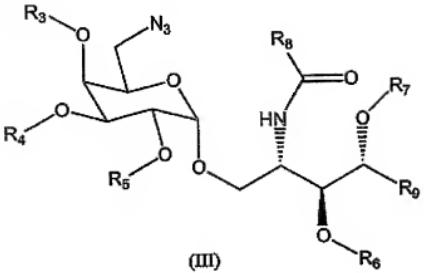
2. (Original) The compound of claim 1 wherein x is 24 and R₉ is *n*-tetradecyl.

3-17. (Cancelled)

18. (Currently Amended) A method of claim 18 stimulating NKT cells comprising contacting an NKT cell with a compound of Formula (I) and a wherein the protein is CD1d protein.

19-23. (Cancelled)

24. (Currently Amended) A method of making a compound of Formula (I) comprising: (i) converting a compound of Formula (III) to a compound of Formula (IV):



and (ii) contacting a compound of Formula (IV) with R₁-LG to afford a compound of Formula (I), wherein:

R₁ is [[:]-C(O)R₁₀, wherein R₁₀ is

(i) —SO₂R₁₀;

wherein R₁₀ is:

halo; hydroxy; OR₁₁; OR₁₂; amino; NHR₁₁; N(R₁₁)₂; NHR₁₂; N(R₁₂)₂; aralkylamine; or

Amendment dated April 27, 2009

Reply to Final Office Action of October 27, 2008

C₁-C₁₂ alkyl optionally substituted with halo, hydroxy, o xo, nitro, OR₁₁, OR₁₂, acyloxy, amino, NHR₁₁, N(R₁₁)₂, NHR₁₂, N(R₁₂)₂, aralkylamino, mercapto, thioalkoxy, S(O)R₁₁, S(O)R₁₂, SO₂R₁₁, SO₂R₁₂, NHSO₂R₁₁, NHSO₂R₁₂, sulfate, phosphate, cyano, carboxyl, C(O)R₁₁, C(O)R₁₂, C(O)OR₁₁, C(O)NH₂, C(O)NHR₁₁, C(O)N(R₁₁)₂, C₃-C₁₀ cycloalkyl containing 0-3 R₁₃, C₃-C₁₀ heterocyclyl containing 0-3 R₁₃, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₅-C₁₀ cycloalkenyl, C₅-C₁₀ heterocycloalkenyl, C₆-C₂₀ aryl containing 0-3 R₁₄, or C₆-C₂₀ heteroaryl containing 0-3 R₁₄, or

C₃-C₁₀ cycloalkyl, C₃-C₁₀ heterocyclyl, C₅-C₁₀ cycloalkenyl, or C₅-C₁₀ heterocycloalkenyl optionally substituted with one or more halo, hydroxy, o xo, OR₁₁, OR₁₂, acyloxy, nitro, amino, NHR₁₁, N(R₁₁)₂, NHR₁₂, N(R₁₂)₂, aralkylamino, mercapto, thioalkoxy, S(O)R₁₁, S(O)R₁₂, SO₂R₁₁, SO₂R₁₂, NHSO₂R₁₁, NHSO₂R₁₂, sulfate, phosphate, cyano, carboxyl, C(O)R₁₁, C(O)R₁₂, C(O)OR₁₁, C(O)NH₂, C(O)NHR₁₁, C(O)N(R₁₁)₂, alkyl, halo-alkyl, C₃-C₁₀ cycloalkyl containing 0-3 R₁₃, C₃-C₁₀ heterocyclyl containing 0-3 R₁₃, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₅-C₁₀ cycloalkenyl, C₅-C₁₀ heterocycloalkenyl, C₆-C₂₀ aryl containing 0-3 R₁₄, or C₆-C₂₀ heteroaryl containing 0-3 R₁₄, or

C₂-C₆ alkenyl, C₂-C₆ alkynyl, aryl, or heteroaryl optionally substituted with one or more halo, hydroxy, OR₁₁, OR₁₂, acyloxy, nitro, amino, NHR₁₁, N(R₁₁)₂, NHR₁₂, N(R₁₂)₂, aralkylamino, mercapto, thioalkoxy, S(O)R₁₁, S(O)R₁₂, SO₂R₁₁, SO₂R₁₂, NHSO₂R₁₁, NHSO₂R₁₂, sulfate, phosphate, cyano, carboxyl, C(O)R₁₁, C(O)R₁₂, C(O)OR₁₁, C(O)NH₂, C(O)NHR₁₁, C(O)N(R₁₁)₂, alkyl, halo-alkyl, C₃-C₁₀ cycloalkyl containing 0-3 R₁₃, C₃-C₁₀ heterocyclyl containing 0-3 R₁₃, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₅-C₁₀ cycloalkenyl, C₅-C₁₀ heterocycloalkenyl, C₆-C₂₀ aryl containing 0-3 R₁₄, or C₆-C₂₀ heteroaryl containing 0-3 R₁₄; or

(ii) -C(O)R₁₀, wherein R₁₀ is defined as above; or

Amendment dated April 27, 2009

Reply to Final Office Action of October 27, 2008

(iii) $C(R_{10})_2(R_{15})$, wherein R_{10} is defined as above; R_{15} is hydrogen, R_{10} , or R_{15} and R_2 taken together forms a double bond between the carbon and nitrogen atoms to which they are attached; or

R_3 , R_4 , R_5 , R_6 , and R_7 are each independently hydrogen, C_1-C_6 alkyl, C_6-C_{12} aralkyl, or C_1-C_6 acyl;

R_8 is $-(CH_2)_xCH_3$;

R_9 is a linear or branched C_3-C_{100} alkyl;

R_{11} is C_1-C_{20} alkyl optionally substituted with halo, hydroxy, alkoxy, amino, alkylamino, dialkylamino, sulfate, or phosphate;

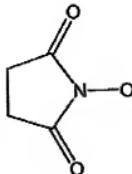
R_{12} is aryl optionally substituted with halo, halo-alkyl, hydroxy, alkoxy, nitro, amino, alkylamino, dialkylamino, sulfate, or phosphate;

Each R_{13} is independently halo, halo-alkyl, hydroxy, alkoxy, oxo, amino, alkylamino, dialkylamino, sulfate, or phosphate;

Each R_{14} is independently halo, halo-alkyl, hydroxy, alkoxy, nitro, amino, alkylamino, dialkylamino, sulfate, or phosphate;

x is 1-100; and

LG is halo, $-OSO_2R_{16}$, $B(OH)_2$, or



R_{16} is alkyl, halo alkyl or aryl optionally substituted with alkyl, halo or nitro.

25. (Original) A pharmaceutical composition comprising a compound of Formula (I) and a pharmaceutically acceptable carrier.
26. (New) The compound of claim 1, wherein R_{10} is CH_3 ,
27. (New) The compound of claim 26, wherein R_9 is C_{14} alkyl.
28. (New) The compound of claim 27, wherein R_8 is $-(CH_2)_{24}CH_3$.
29. (New) The compound of claim 27, wherein R_8 is $-(CH_2)_{22}CH_3$.
30. (New) The compound of claim 1, wherein R_{10} is selected from $-(CH_2)_2COOH$, $-(CH_2)_3COOH$, and $-(CH_2)_4COOH$.